TOGA SPRINGS.

In the report which is appended of the proceedings of the American Association yesterday, the important paper by Mr. Thomas A. Edison is given in full. It describes lucidly the important discoveries he made in the treatment of platinum. An abstract of Mr. Upton's paper on the test of Faradic machines is added. An account is also given of the interesting remarks by Professor Chandler on the Saratoga Springs, with details showing the general work of the scientists at yester-

THE PROCEEDINGS OF THE SCIENTISTS. POPULAR DISCOURSE ON THE SARATOGA SPRINGS -PAPERS FROM MR. EDISON AND MR. UPTON. FROM A SPECIAL-CORRESPONDENT OF THE TRIBUNE.

SARATOGA, Sept. 2 .- The closing sessions of the

annual meeting of the American Association for the Advancement of Science were held to-day. The members look back upon their week of work as time well spent, and which will be fruitful in sults. It has been one of the richest and most portant meetings ever held by the association in the number and value of the papers presented, and one of the most notable in attendance and interest. the most popular meetings of the association has been that given to the subject of the Saratoga springs. As the Town Hall was occupied at the time the addresses were delivered in the large M. E. Church in Washington-st. The interior of the church suffered a change into something new and strange. On the platform was a row of tables earing big jars containing water from the principa springs, bottles filled with chemicals, and geological ecimens of various sizes. Under three glass were watch crystals, in which were salts and other solid matter obtained from three pints of water from three well-known springs. In the centre crystal was a heap of white powder made up of all the solid substances which can be got out of a pint of the water. In the crystals about this were the amounts of each constituent; in some cases an almost imperceptible quantity, in others a front and occupying nearly all the space behind the platform were broad rolls of cloth, with names and gures on them. At a distance these might have en mistaken for the bulletins on which election returns are exhibited. They actually were displays of analyses of the Saratoga and Ballston waters, and of other well-known waters in other parts of the country. One analysis was of Croton, and all exhear from Professor Chandler, that this contained a quantity of saits and other substances in solution.

account given by Professor Chandler of mineral waters in general, and the characteristics of the here and of the substances held in solution by the vay in which he handled his theme, and his aniatea delivery, prevented its ever becoming dull. notion that the waters of some of the springs e "doctored" with Epsom salts had no foundation. The history of the formation of the "high is" at the High Rock Spring by the water osting carbonate of lime forming turn presented at considerable length. The theory clocal geologist, that the ashes of a charcoal tire, che were discovered by excavation many below the surface of the turn at this spring, at have dated back over 5,000 years, was ridied. His theory was based on the opinion that turn forms very slowiv. He was wrong in this, foressort handler proved by examples of rapid

The geology of Saratega was described by Professor James Halt, State Geologist, and Professor I. Sterry Hunt spoke of the genesis of the springs. Both Professor Georgian Foundation of the springs of the supply of immeral water under the surface of this part of the State was inexhaustible, and it was shown that a spring could be set flowing almost anywhere that a spring could be set flowing almost anywhere that a spring could be set flowing an artesian well. A in or about Saratoga by boring an artesian well. A man who had made a fortune in oil in Pennsylvania began boring for oil in a nill in Ballston, bringing much ridicule upon himself. He got down over 600 feet, and then a friend, who knew that boring for oil here was useless because it was not an oil region geologically, threw a piece of steel down the hole, thus preventing further boring. From this artesian well comes an abundant supply of mineral water, and it has the peculiar property of "blowing off" once a day with a loud noise.

MR. EDISON'S DISCOVERIES. Much interest was evinced in regard to an important paper by Mr. Thomas A. Edison on "The Phenomena of Heating Metal in Vacuo by Means of an Electric Current." In the absence of Mr. Edison Professor F. R. Upton read the paper from the

writer's exquisite manuscript.

In the course of my experiments on electric lighting I have developed some striking phenomena arising from the heating of metals by flames and by the electric current, especially wires of platfinum and platfinum alloyed with tridium. These experiments are still in progress. The first fact observed was that platform lost weight when heated in a fiame of hydrogen, that the metal colored the flame green, and that these two results contaned until the whole of the pistinum in contact with the name and disappeared. A platinum wire \$1000 of an inch in diameter and weight 306 milligrammes was bunched together and suspended in a hydrogen flame. It lost weight at the rate of a fraction less than one milligramme per hour as long as it stretched between two clamping-posts, and arranged to pass through a hydrogen flame, it is colored a light green, but when the temperature of the wire is raised above that of the flame, by passing a current through it.

above that of the flame, by passing a current through it, the flame is colored a deep green.

To ascertain the dimination in the weight of a platfining wire when heated by the electric current, I placed between two clamping-posts a wire 5,000 of an inch in diameter, and weighing 266 milligrammes. This wire, after it was brought to incandescence for twenty minutes by the current, lost one milligrammes. The same wire was then raised to incandescence for twenty minutes it gave a loss of three milligrammes. Atterward it was kept ince descent for one hour and ten minutes, at which time it weighed 265 milligrammes, a total loss of 8 milligrammes. Another wire weighing 343 milligrammes was kept moderately meandescent for pine hours, after which it weighed 361 milligrammes, showing a total loss of 42 milligrammes.

Similicratories. Another wife weighing 343 milligrammes was kept moderately incandescent for nine hours, after which it weighed 301 milligrammes, showing a total lose of 42 milligrammes.

A platinum wife Nono of an inch in diancter was wound in the form of a spiral le of an inch in broath. The two ends of the spiral were secured to claupling posts, and the whole apparatus was covered with a glass shade 2½ inches in diameter and 3 inches high. Upon bringing the spiral to meandescence for twenty minutes that part of the globe in the with the sides of the spiral became shightly darkoned; in five hours the deposit became so thick that the meandescent spiral could not be seen through the deposit. This film, which was most perfect, consisted of platinum, and I have no doubt but that large oldess of glass might be coated economically by plating them on each side of a large sheet of platinum kept incandescent by the electric current. This loss in weight, towether with the deposit upon the glass, promented a very sectious obstacle to the use of metallic wives for giving light by incandescence, but this was easily surmounted after the cause was ascertained. I costed the wire forming the spiral with the oxide of magnesium, by dusting upon it fluely powdered acetate of maxnesium; while incandescent the sail was decomposed by the heat, and there remained a strongly adherent coating of the orade. This spiral so coated was covered with a glass shade and brought to incandescence for several minutes; but, insucate of adeposit of the oxide of magnesia. From this and other experiments I became envinced that this effect was due to the wrashing action of the platinum; any the heat of the platinum; any the importation of the hydrogen dame was associate to the washing action of the strange of the remained are the coloration of the hydrogen dame was associated. At a pressure of two millimeters the spiral was kept at head developed in the receiver of the conon in the pump and arranged it is such a manner that the current could pass thr

to a point where a quarter of an inch spark from an in-duction cell would not pass between points one milli-meter apart was piaced a spiral, the connecting wires passing through the glass. The spiral has been kent at the most dazzling incandescence for hours without the slightest deposit becoming visible.

OTHER INTERESTING OBSERVATIONS. I will now describe other and far more important phenomena observed in my experiments. If a short length of platfaum wire 1,000 of an inch in diameter be length of platinum wire 1,000 of an inch in diameter be held in the flame of a Bunsen burner, at some part it will fuse, and a piece of the wire will be bent at an angle by the action of the globule of melted piatinum; in some cases there are several globules formed simultaneously, 41000 of attinch in diameter this effect does not take place, as top temperature cannot be raised to equal that of place, as top temperature cannot be raised to equal that of the smalled wire owing to the increased radiating surface and mass. After heating, if the wire be examined under a microscope, that part of the surface which has been incandescent will be found covered with innumerable cracks. If the wire be placed between clamping-posts and heated to incandescence for twenty minutes by the passage of an electric current, the cracks will be so misriced as to be seen with the naked eye, the wire under the raicroscope presents a shrunken appearance and is full of deep cracks. If the current is continued for several sours these effects will so increase that the wire will fail to pieces.

A NEW FORM OF PLATINA.

A NEW FORM OF PLATINA. This disintegration has been roticed in platina long sub-tected to the action of a flame by Professor. John W. Draper. The failure of the process of lighting invented by the French chemist Tessie du Motay, who raised sheets of platinum to incandescence by introducing them into a hydrogen flame, was due to the

sheets of platinum to incandescence by introducing them into a hydrogen flame, was due to the rapid disintegration of the metal. I have ascertained the cause of this phenomenon, and have succeeded in eliminating that which produces it, and in doing so have produced a metal in a state hitherto unknown, and which is absolutely stable at a temperature where nearly all substances moit or are consumed; a metal which, although originally soft and pluble, becomes as homegeneous as class and as rigid as steel. When wound in the form of a soural it is as springy and classic when at the most dazzling incandescence as when could, and cannot be aunealed by any process now commonly known.

For the cause of this shrinking and cracking of the wire is due entirely to the expansion of the air in the mechanical and physical pores of the platinum and the contraction upon the escape of the air. Platinum as sold in commerce may be compared to sandatone, in when the whole is made up of a creat number of particles, with many air-spaces. The sandatone upon meling becomes homogeneous, and no air-spaces exist. With platinum or any metal the air-spaces may be eliminated and the metal made homogeneous by a very simple process. This process I will now describe. I had made a large number of planing spirals as of the same size and from the same quality of wire; each spiral presented to the air a radiating surface of \$\frac{n}{n}\$ of an inch; tive of these were brought by the elecutic current up to the meiting point, the light was measured by a photometer, and the average light was equal to four standard candles for each spiral just at the melting point, One of the same kind of spirals was placed in the receiver of an air-pump and the air exhausted to two millimeters; a weak current was thee passed through the wire slightly to warm it for the purpose of assisting the passage of the air from the pores of the metal into the vacuum. The temperature of the wire was gradually augmented at intervals of the mounts. Before each increase in the curren to cool, and the contraction and expansion at these high temperatures caused the wire to weid together at the point previously containing air. In one hour and forty minutes this sprail had reached such a temperature without meiting that it was giving a light of twenty-five standard candles, whereas it would undoubtedly have melled before it gave a light of five candies, had it not been put through the above process. Several more spirals were alterward tried, with the same result. One spiral, which had been brought to these high temperatures more slowly, gave a light equal to thirty standard candles. In the open air this spiral gave nearly the same legit, although it required more current to keep it at the same temperature. Upon examination of these spirals, which had passed through the vacuum process, by the aid of a microscope, no cracks were visable; the wire had become as white as sliver, and had a polish which could not be given in by

bard as sicel and just as classified in places becomes trace by than row. Steel who used in places becomes factor for the row and assumes the color of silver. Aluminium melts only at a walle heat. In conclusion, it may be interesting to state that the melting point of many exides is dependent upon the manner of applying the heat; for instance, pure exide manner of applying the heat; for instance, pure exide manner of applying the heat; for instance, pure exide manner of applying the heat; for instance, pure exide of the fingers, sometimes sub-crystalline and very hard.

Professor J. C. Smock spoke of the surface limits of the continental glacier in Newof terronnia code how hite it mais like wax and con-ducts electricity when on an incandescent platfinum spiral which is at a far lower temperature; on the other hand, exide of alomin un easily melts in the exp-hydrogen flame, while it only virtiles on the platfinum spiral.

"FARADIC MACHINES," Mr. Upton, Mr. Edison's mathematical assistant, rend a paper on "Tests of Faradic Machines," Fol-

lowing is an abstract : The title of the paper, "Test of Paradic Machines." arises from the need of a new term to cover both dynamo and magneto machines, in the naming of which there is so much uncertaint; at present. This confusion was machine could be either a magneto or a dynamo, as the connections happened to be made; and it was then that the name was proposed by Mr. Edison. If these machines could be called "Faradie," in honor of Faraday, it would be in the nature of a monument built to the memory of the discoverer and first expounder of the principles on which, they rest, at the instance of the inventor, who had used the discoveries with so much success. This monument would be an

expounder of the principles on which, they rest, at the instance of the inventor, who had used the discoveries with so much success. This monument would be an enduring one, for in the near future many thousands of these machines will be in use for lighting purposes and for the transmission of power.

Mr. Upton described the methods pursued at Mr. Edison's laboratry, by which the value of the toachines were tested. He gave an account of the defects of existing dynamometers, some of which varied from 10 to 20 per cent in their readings. As the mechanism in a dynamometer has no other function than to weigh. Mr. Upton pointed out the absurdity of the present forces which were either very poor spring balances, or scales with rotating bearings, none being of a nature that a merchant would think of seiling goods with, though they had been used for se ling burry.

In the force adopted the power was weighed on a platform scale. The principle is extremely simple, that if the speed and strain on a belt are known the power may be calculated by munitiplying the two together. The belt was passed under a pulley, in the same mannor as in the case of an ordinary block, this sellag attached to the large weight on the platform of the scale, and the weight in the platform of the scale, and the weight in the platform of the scale, and the weight in the platform of the scale, and the weight in the platform of the scale, and the weight in the platform of the scale, and the weight in the platform of the scale in lifted measured. So sensitive was the apparatus that the power taken by the ornaises resting lightly on the commutator could be detected when the effective weight on the platform of the scale in the directive was passed under a pulley, in the carbon lightly on the commutation could be detected when the effective was passed on the power to ten horse power.

Mr. Upton gave some tests of the Gramme machine, showing that with a constant field the electromitive force became much of the reading of the residuary of the power is resid

GEOLOGICAL THEMES.

Professor C. H. Hitchcock presented a paper to day on the Green Mountain Anticlinal. He spoke substantially as follows:

The geologists believed that the crystalline rocks of the Green Mountains and of all New-England were the most ancient known, or primary. A different view began to prevail about forty years age, known as the Meta-morphic, by which it was claimed that these rocks were not older than the Silurian system of New-York. Of actual workers in the field, Adams first described the anticinal feature in a single locality. The author exhibited a diagram, the result of twenty years' of field work, wherein the ridge structure was seen to predominate. Logan, in 1858, from theoretical considerations, insisted that the structure was synchial, but

published a paper, adopting the and disclaiming those of Logan. Others have expressed themselves to the same effect, and this view is decidedly raining ground among reologists. That the Poisdain quartite at the west base of the Green Mountains is newer than the crystallines of the summits it demonstrated by the fact that the former is made of the rules of the inter. The senelsses were broken up and the rules of the inter. The senelsses were broken up and the rules of the inter. The senelsses were broken up and the rules of the inter. The senelsses were broken up and the rules of the interest of the control of the rules of the inter. The senelsses were broken up and the rules of the interest of the interest of the interest of the interest of the quartities. The localities illustrating this statement are numerous. Similar statements have been made of the corresponding rocks all the way through New-tork. New-forey and so on to Alabama. Along this same aren the succession of formations is the same, first crystallines, second Potsdain quartite, third calcuterous sand rocks and himestones, fourth Hudson Silver sinters.

The tis no reason why the crystallines of the Middle and Southern States, generally admitted to be of Excelsing services, and the surface under the different from those of the Green Mountains. And the allocation from the Advirondacks to Southern New-Hampshire shows Laurentian dipping beneath Lake Champshir, rising but not reaching the surface under the Green Mountains, and coming to view in the coarsely crystalline perphyritie goess of the Green Mountains, therefore, occunies a place between the Laurentian and the Putsdam. Referring to Frofessor Dana's views, the nuthor stated that recent publications showed an approximation to agreement. Dana fluds in Lastern New-York the same order of arrangement as in Vermont, that is, crystallines, Potsdam imentones, Hadson Elvergroup. As the rocks are easenthally continuous from New-York to Vermout, the similar arrangement indicates identity in age. Firthermore,

PROFESSOR COOK'S PAPER. Professor George H. Cook read a paper on "the New Red Sandstone formation of New-Jersey."

The following is an abstract of his paper: He mentioned the papers of Professors Rogers Hitchesch, Emmons, Cook, Russell, Fontaine, Walling and others, which had previously been presented to the public. He also mentioned the difficulties attending the and others, which had previously seek presented to the public. He also mentioned the difficulties attending the study of the formation, in consequence of its being of pure water origin, of the scarcity of fossils in it, the slight disturbance to which it has been exposed, and the uniformity of the materials of which it is made up. The interest which attackes to it is due to the fact that it is the only representative on the Atlantic slope of the long interval of time which was occupied by the Permian Triassle, and official to the formations. He showed seem flaures of a fossil from the lowest part of the formation, which had a strong resemblance to the Lepidodendron, which it is well-known does not occur above Permian. He proved that, from the uniform northwest dip of the rock-strata, and the breadth of the formation, which in its widest part on the Delaware is thirty miles; it must, if the inference and computation are correct, be eight infles thick. He did not, however, accept this conclusion, but that it must be much thinner, probably only a few thousand feet thick.

From the Connecticut River red sandstone and the red sandstone of Eastern Virginia having a uniform southeastern dip, it is inferred that there was an axis of elevation running northeast and southwest between those two beits of red sandstone ware elevated so as to give the rocks of the belt on the northwest a porthwest dip, in all others thought by some that these beds of red sandstone have once covered the whole interval between the two beits, and that the indule portion was elevated and

The address of Professor William North Rice, of Wesleyan University, on the Geology of Bermuda was marked by ability and interest. His observations were made during a residence of several weeks in the Winter of 1876-77. Appended is a brief ab-

struct of his remarks: The rocks in Bermuda are of course limestone

Jersey. He spoke in substance as follows:

The existence of a great terminal moraine and a Southern limit to the glacial drift in New-Jersey and the adjacent States, was pointed out to the author in 1876, by Professor George H. Cook, In that year the southern limit of the glacial drift was traced across the State from South Ambey to a point on the Delaware River, near Beividere. Details were given of further investigations in tracing this line. The paper considered two questions:
What was the thickness of the ice-sheet along its southern margin; and what was the rise of its upper slope northward. The terminal moraine represents both materials carried forward under the foot of the giacier and also the earth and stone carried on its surface and dropped in a confused mass as it melted and retreated northward. These accumulated beaps may in places have equalled in height the greatest thickness have equalled in height the greatest thickness of the glacier front, although in general he morame would fall short of the height of the glacier. As we see it, this terminal moraine raises greatly in height from point to point. It is possible to get at a minimum estimate of the thickness by considering the heights of some of the hills in the moraine. It is safe to conclude that the tee front of the great glacier was from 200 to 400 feet in thickness. A care all exploration of that part of New-Jersey, which is nortal of the terminal moraine, has thus far falled to discover any peaks or crests which show no marks of a glacier.

SCIENCE IN THE SCHOOLS.

The committee on the introduction of science in the schools was discharged, and the following were appointed a committee with the modified title of a Committee on Science Teaching in the Public Schools: Professors Youmans, of New-York; Grote, of Buffalo; Newberry, of New-York; Shaler, of Cambridge, and Major Powell, of Washington.

A short paper by James Samuelson, President of the Liverpool Science and Art Classes, was of much value to all interested in scientific education. It was on the operations of the Science and Art Department of the Privy Council of Great Britain, and was as follows:

As it appears to me, during the short tour which I am making through the United States, to be wide field for the diffusion of scientific knowledge, both practical and theoretical, among the industrious classes of this country. I venture to lay before your association a brief no tice of the operations of our science and art depart ment, so far as science teaching is concerned. And

ment, so far as science teaching is concerned. And my right to do so is based on the fact that I have not only founded three or four science leading schools, but that I have actively promoted the objects of the denartment almost from its foundation, and an therefore intimately acquainted with the objects and working of the system.

The Science and Art Department of our Committee of the Privy Council on Education was founded by an "order in Council," February 25, 1856, under the provisions of an act of Parliament. The object of the department is to promote science instruction chiefly among the industrial classes, and the means employed are:

I. Payments to teachers on results shown by the annual May examinations. These examinations are conducted simultaneously all over the three kingdoms by printed papers prepared by the examiners, who are selected from our leading scientific men.

men.

II. Queen's prizes, being scientific books scleeted by the successful students from a catalogue sent down by the Department; also gold and silver medals (competitive), one of which is given for each branch of science.

III. Exhibitions, scholarships, studentships, etc.

give you an idea of the growth of the system I will extra rates can be hardly counted on after the surfeit give you a few figures.

THE PROGRESS ATTAINED. For some time after the foundation of the department only five towns responded, and of the five schools so founded one or two were unsuccess ful, and were closed. In 1861 I had the honor of founding the Liverpool School of Science, the first established there, and the system was already so far developed that we carrolled between 100 and 200 students. In 1867 there were 213 schools in Great Britain giving instruction to about 10,000 of both sexes; in the session of 1876-1877, 1,348 schools with over 55,000 students. Owing to stracter regulations being enforced, the number of students diminished in 1877-1878, being 52,330, but the schools multiplied, there being 1,484, with 4,559 classes. The truits of the system are wide-spread. Every large town has many schools, London alone having 165, and the smaller hows and even villages have their classes, the students of which are often more successful than those of the more important centres of learning and industry.

Now let me endeaver briefly explain how the various localities secure the benefits offered by the department:

A committee of gentlemen, not less than five in founding the Liverpool School of Science, the first

Now let me endeaver breefly explain how the various localities secure the benefits offered by the department:

A committee of gentlemen, not less than five in number, and one of whom must be a elergyman or magistrate, is formed in any locality for the purpose of managing the classes. This committee places itself, though its secretary, in communication with the department, engages the teachers, who must be "certificated"; and so the "science school" is formed. All payments are made to the committee, who may, if they please, retain one-lifth of the teachers fees for cost of management. In order to understand the mode of proceeding we must pass on to the May examinations. The papers at these examinations are framed to include six grades of students who may pass as follows: Elementary, first and second class and second class, houors, first and second class. As soon as a student has passed in the second class of the advanced stage, he is entitled to earn payments on results; in fact, he is a "certificated" teacher of the department. He must give twenty-five lessons (class lectures) in any subject which he teaches before he can receive payment for his instruction. This payment is in proportion to the degree of success attained by his pupils, and ject which he teaches before he can receive payment for his instruction. This payment is in proportion to the degree of success attained by his pupils, and in no case exceeds £4 (\$20) for each student. As a matter of fact, any industrions and intelligent student may enable his teacher to earn this amount. It is impossible in a short paper to enter into the details of the system, but I will mention a few of the subjects taught as they occur to my memory: Biology in all its branches (including botany and vegetable physiology); physics (acousties, light and heat, magnetism and electricity); physical geography, now known as "physiography," every branch of mathematics; chemistry (organic and inoranic); building construction, steam haval architecture, geology, mineralogy, mining, etc., etc.

THE ADVANTAGES OF THE SYSTEM.

THE ADVANTAGES OF THE SYSTEM. A word or two as to the advantages of the system It is making our men better mechanics. It is train ing 50,000 people to-day to think systematically, and to reason without passion or prejudice; to ap preciate your "Cooks" and your "Ingersells," and

preciate your "Cooks" and your "Ingersells," and by their influence to enable those about them to form correct estimates of the value of public utterances on scientific and philosophical questions. It is enabling many young persons who would have drudged at the desk or counter all their lives to carn an additional income by science teaching, and others to form a higher estimate than their ordinary avocations present of life and of the world in which they live. It is infiniacing our homes, by giving to people about to enter life more rational views of sanitary maters, and all others pertaining to health and disease; and, last but not least, it is expanding the views of young people, educated it may be in some rigid, restricted though devotional school of thought, and making them more charitable in their opinions of those who differ from them on relatious questions. In fact, it is materially beneficient to the teacher, mornally advantageous to the taught, and beneficent in its general influence on sectory.

Professor F. G. Barker, of Philadelphia, gave a learned discourse on "The Conversion of Mechanical Energy into Heat by Magueto-Electric Ma-

ical Energy into Heat by Magneto-Electric Machines." Professor Barker said:

In consequence of a suggestion before the Parliamentary Commission on Electric Lightfine, made by Sir William Thempson, that hot water might probably be distributed through the streets of a city comounically in the capper takes used to convey electricity for power, the heat being profined by the reastance of the tube, he had made a series of experiments upon a Siemens machine, with a view to determine the economy practically realizable by this method of heating. The experiments were made in Ausonia, Conn. by the kindness of Walface & Sons. The ultimatum of utility deduced by Professor Barker from this theory of heat generation was that it could be applied to every necessity of the nousehold. It would enable one to sit at the table and instead of waiting an hour for the servant to bring a boiled egg or a cup of cofice cooked in a distant apartment, the heat could be applied by turning a tharm's

two by Professor Burt G. Wilder, of Cornell University, relating to the brain of cats, one of them being of a general character, the other recounting the Professor's singular discovery of a cat's brain with the corpus callosum absent. His "Notes on the Anatomy of the Cat's Brain" was illustrated by Anatomy of the Cat's Brain "was inistrated by crayon drawings and diagrams, models, photographs and preparations of the brain of cats. The structure of the feline brain was compared with that of several other animals, such as dogs, monkeys and man. Mr. Lewis Boss, director of Dudley Observatory, Albany, read two papers, one on "Star Places" (-m), the other on "Solar Parallax from Minor Planets at Opposition" (-m).

FREE FIGHT IN A LIQUOR SHOP.

THREE MEN SHOT-ONE OF THEM ARRESTED AS A

THEP.

A quarrel occurred early yesterday morning in
Bernard Wurtenmeyer's liquor shop, at Park and Baxter-sts., between a number of ruffians and thieves who frequent the place. They had been drinking through the night. A young man named Cuddy drew a pistol and shot Dennis Murphy in the arm, "Johnny" McGowan in the leg, and at tempted to shoot another of the crowd named Lory, but massed his aim and shot Daniel Driscoll, of No 5 Chrystie-st. While the fight was in progress Officer Frasier was attending to a robbery which

Officer Frasier was attending to a robbery which had just been discovered in White-st. The friends of the wounded men carried Murphy and Driscoll to the Chambers Street Hospital.

Driscoll was found to have a severe wound in the abdomen. He is a well-known thief, and had only returned from Sing Sing about six weeks are. A short time afterward he stole a watch, and the posice have been looking for him since. After his wounds had been dressed at the hospital the physician sent him to bed. One of Driscoll's friends called to see him at 3 a.m. yesterday, but the watchman of the hospital would not allow any one in the building. Driscoll then picked up his clothes, pushed the watchman one side and escaped. His friend assisted him and finally brought him to his inome. Officers were searching for him vesterday. They discovered some of his friends going to a liquor store for some brandy, and traced them to No. 5 Chrystie-st. Driscoll was arrested and taken to the Fourteenth Precinct and was afterward transferred to the Fourth Precinct. He was taken to court charged with stealing a watch, and was remanded. Last night he was in a cell, although suffering from the wound. It is expected that other arrests will be made for the shooting of Driscoll, Murphy and McGowan. They will give no information about the affair, and claim that the shooting was accidental.

TRAFFIC ON THE ERIE CANAL.

BUFFALO, Sept. 1 .- The Canal Collector at

this point furnishes the following statement of the canal business of Buffalo for the month of August and since the opening of navigation during the years of 1878 and 1879 : Increase in 1879 Clearances from opening of navigation to August 31, 1879 Do., same time, 1878 168 Increase in 1879
Amount of tolks for August, 1879
Amount of tells for August, 1878...

Increase in 1879
Amount of toils from opening of navigation to
August 21, 1879
Do. same time, 1873 514,956 21 276,780 77 Decrease in 1879.....

THE PEACH TRADE.

Receipts of peaches for the season to date exceed 1,000,000 baskets for this city. There have been sent directly from Delaware orenards about 280,000 New-Encland. Yesterday's offering was only 28,000 buskets here and 9,000 for the East. Prices

III. Exhibitions, scholarships, studentships, etc., Among these are "studentships for training," which give the student the privilege of attending the science classes at South Kensangton at the charge of the State; also the well-known Wintworth scholarships of £100 per annum for three years for practical and theoretical proficency.

IV. Grants toward a building fund for the erection of science schools.

V. Grants toward apparatus and school fittings.
VI. Laboratory grants.

VII. Payments in aid of training teachers.

The subjects in which instruction is given are twenty-four in number, and the number of schools in which instruction is imparted, chiefly in the evenings, is at present nearly 1,500. In order to

OBITUARY.

JAMES LINDSAY. Mr. James Lindsay, of the eminent firm of George Bruce's Son & Co., died at his residence in Brooklyn, yesterday morning, of pneumonia, after an Brookyn, yesterday morning, of passenger, illness of four days. Mr. Lindsay was born in Glasgow, Scotland, in 1825, and learned his business in the well-In 1851 he came specially to this country, by request of Mr. George Bruce, who offered him the position of superintendent of his foundry. How highly Mr. Bruce valued his services may be estimated from the fact that, a few years prior to his death, he gave Mr. Lindsay an

a few years prior to his death, he gave Mr. Lindsay an interest in the establishmout, but concealed from him the fact, paying him his share of the profits as a present. It was only when Mr. Bruce died that his superintendent knew the whole extent of the kindness with which his employer regarded him. Subsequently Mr. Lindsay was admitted as a partner. Mr. Lindsay leaves a family of three cerphaned children, Mrs. Lindsay having died in 1874.

As a type founder, Mr. Lindsay was well known to the trade and newspaper interest. He was proud and fond of his profession, and auxious to add to the well-established reputation of the old house with which he had become councited. His taste and skid were of the first order; he was a thorough master of all the minutius of type manufacture; and his loss cannot fail to be knealy felt by these with whom he was most intimately connected, and who best understood his merits.

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The Rev. W. B. MERRITT.

The Rev. W. B. MERRITT.

The Rev. W. B. Merritt, pastor of the Sixth Avenue Reformed Course, died yesterday of hemorphage of the bowels, after an illness of one week, at his listo residence, No. 24 Charles-st. He was born at kingston, N. Y., April 4, 1836, and in 1852 became a clerk with David Wagstaff, grocer, on Cortland-st. In 1857, showing an Inclination to enter the ministry, the young Men's Christian Association, then a new organization, met the expenses of his advantation, and he was prepared for college by the Rev. Drs. Geroton and W. V. V. Mabon. He was graduated from Rutgers College in 1852, attended the New-Humawick Theological Seminary for three years and was assigned to be foreined to the Stath Avenue Reformer 24 at Kingston, N. T. He preached his last serious August 23, and arrived in New-York yesterday, orought the leaves a which will be taken to Kingston for burial.

The Gallia, which sailed from Liverpool August 23, and arrived in New-York yesterday, orought the leaves a very large of the body of Colonel Fred A. De MOTT.

The Gallia, which sailed from Liverpool August 23, and arrived in New-York yesterday, orought the looky of Colonel Fred A. De Mott, of Morristown, N. J., who died on the vorage. Mr. De Mott was about university by orars of age. He becan the study of law in the older of the instance of the large things will be a properly and alterned and recomplising the residuary leaves to the colons. The will be a properly a

J., who died on the voyage. Mr. De Mott was about thirty-five years of age. He be, an the study of law in the office of the late Jacob Vanatta, with whom he was afterward in partnership in 1861, and was admitted to afterward in partnership in 1861, and was subjected to practice as an attorney in November, 1865, and as counsellor in 1869. He was appointed Judge-Advocate General of New-Jersey by Governor Randon, and in 1872 Governor Parker appointed him Proceeutor of the Pleas for Meris County. He was reappointed by Governor Bedle in 1877.

Colonel be Mott sailed for Europe May 27, and had been travelling with his wife through Treiand, England and France.

JOHN ADAMS JACKSON

John Adams Jackson, a distinguished American scuiptor, is just dead at Florence. He was born in Bath, Me., in 1825. Apprenticed to a machinist in Boston, he developed talents for sculpture, and went to Florence to study the art. He came back to New-York in . 861, returning to Plorence in 1865. Among his best known works are his "Eve and Abel," "The Culpr Fay," "Dawn," and he asso executed a number of potract busts. He was employed by the Kane Monumer Association in 1860 to execute a statue of the Arcite emplorers; and he furnished some figures for the Souther gate house of the Central Park Reservoir.

REESE T. BOWEN.

FREDERICKSBURG, Va., Sept. 2.-General Reese Bowen died in Tazewell County, on Friday last, in his seventy-first year. He represented the IXth Virginia District in the XLIIId Congress, to which he was siected over Judge Hughes, of the United States[Conri-for the Eastern District of Virginia. He had represented his county in the State Legislature.

BRIGHTON BEACH RACES.

LARGE FIELDS AND INTERESTING CONTESTS-SUN-LIGHT, PIRATE, WILLIE D. AND KELSO THE

The attendance at the Brighton Beach Fair Grounds yesterday was small in comparison with the erowd which witnessed the Fortuna-Brambie race of est Friday; yet there were probably 2,500 person the speculators who laid their money on horses unlikely to win, returned to the city last night with beaming favorites in their respective races, and all except the last were defeated. One jocker, Fisher, was successful in winning two of his mounts, while Harris was thrown

of \$250, the second to receive \$50, out of ten horses named, eight started. These ranked in the pools as follows: Ciaudia (101 pounds) \$55, Corella (115 pounds) and Euterprise (101 pounds) \$29 each, Janet Murray (115 pounds) \$22, Sunlight (115 pounds) \$11, and Le Rot (115 pounds), Little Jim (124 pounds), and Helms- gr inds) in the field, \$21. At the second atmpt the signal was given, with the horses in a bunch, Enterprise and Helmsman being in the front of it. Going past the grand stand and around the lower turn the positions changed rapidly, Little Jim and Claudia racing in the van at the quarter-mile post, closely fol-lowed by Enterprise and Corella. Dashing along the backstretch and around the upper turn Sunlight and Janet Murray rushed forward, the former taking the lead and keeping it to the end, where he arrived in 2:01, a length ahead of Ciaudia, who had the smallest sec-tion of a length the best of Janet Murray and Euterprise; Le Rel, Corelle, Little Jim and Helmsman followed as named. Fortunate holders of mutual pool tickets on Sunlight were paid \$57.

The winner of the second race turned up unexpectedly Kilifica's bay gelding Pirate, who won it by two lengths from a field of ten horses in which Morris's well-known racer Egypt was the favorite, and came in second. Before the race Egypt sold for \$51 to \$40 for Dairy Madd and \$90 for the field, feeluding Strong's Meco, Yard's Lillian, Pryor's Pique, Woodford's Callgula. West's Mollie McGinley, Ayres & Sutcliffe's Alleveur, A. P. Smith's Dora Doon, and the winner. The race was

Meec, Yard's Lillian, Pryor's rique, woodlor's Cauguia, West's Mellie McGiuley, Ayres & Suteinfe's Allevenr, A. P. Smith's Dora Doon, and the winner. The race was for a purse of \$200, \$30 to the second, distance three-quarters of a mue. Lillian, followed closely by Erryt and Pirate, made the running from the start to the half-mile post, with Pirate and Meec hunting them sharply. Before turning into the homeward stretch Pirate had passed to the front, and Lillian was falling rapidly back to Join Dora Doon far in the rear. Egypt held his place of second to the string, which Pirate crossed two longths abased of him in the good time of 1:18; Meec third, Caligula fourth, and the others straggling. Egypt carried the top weight, 122 pounds, while the winner only packed 106. Mutual pool tickets paid \$30.55.

The third was the best contested event of the day. It was for a purse of \$350, the second horse to receive \$50, selling allowances, distance 12 miles. Nine horses were entered, and all started. These were Killelies's Viceroy (100 pounds). Ayres & Sucientife's Bid Dillon (111 peunds). O'Connell's Albert (99 pounds), Ackerman's Surze (105 pounds), Ayres & Sucientife's Bid Dillon (111 peunds). Newman's Shylock (105 pounds), Gaffaer's Lucky Bit (84 pounds), Xird's Nupper (110 pounds) and Killen's Patrol (106 pounds). They ranked in the pools in the above order, Viceroy selling the favorite for double what was paid for the second horse, which in this case intried out to be the winner in Willie D. After a pretty even start, of which Lucky Hit. the favorite and Albert had the best, and Nipper the worst, the horses ran in a bunch to the three-quarter mile post, where Lucky Hit and Albert was neck and nose in front, Viceroy, Patrol and Willie D. astresk of daylight in their rear, and Bill Dillon, Sarge, Nipper and Shylock chasing hard behind. Sweeping post the grand stand little change could be noted, except that the favorite was keeping stride and then clear of the field at the quarter mile, where keep were should be noted

Niper sixth. Shylose several, and the color and the color of the winner, who was entered to be sold for \$1.000.

A two-mile burdle race over eight hurdles for a purse of \$300 ended the day's sport. This was the only race in which the choice of the pool box wen. The siarters were Kelso. Katte P. Ventilator and Calicula (new at hurdle jumping). Kelso was a slight favorite over the others, Katte P. and Ventilator, who sold nearly even, while Caligula was cheaply thought of. Kelso took the lead from the start until the third hurdle was reached, when the three hurdle-jumpers were abroast, and Caliguia was running rider-less in the rear, having fallen and thrown his jockey at the second hurdle. At the end of the first mile Ventilator had a nomentary advantage, but in the structle which ended between Kelso and Katte P. he was left twenty lengths in the rear. These two alternated in front until the last hurdle was jumped by Kelso with a length's advantage, which he retained home without trouble, while his rival was driven in hard under the whip. Thee \$356. Matinal tickets paid \$11.40.

To-morrow will be the next race day, when Bramble, Foruma, Miniter. Clara D. and Franklin will meet in the Brighton Cup race for \$2,000.

CHEERING!—First Artist (on a pedestrian tour): "Can you tell which is the best find in Baconhurst!" Rustic (bewildered): "Dunco" Second Artist (Bred): "But we can get hads there, I suppose! Where to travellers see raily got" Rustic: "Go to the Union noostly!"—(Punch.

THE COURTS.

THE O'HARA WILL CONTEST,

TESTIMONY BEFORE THE SUREOGATE BY THE LAWYER WHO DRAFTED THE WILL AND ONE OF THE EXECUTORS. The hearing in the contest of the will of

Mrs. Mary O'Hara, which was postponed from the on of July, was resumed Monday in the Brockiye 14:5 gate's Court. The will left the greater part of her proerry to her executors, Judge McCue, Dr. William H. Dudley and the Rev. Father Robert J. Macuire, 1118 contested by two grand-daughters on the grounds of want of capacity on the part of the decedent and undue proponents of the will was Eugar M. Cullen, the lawyer who drafted the will in question. He have evidence that Jady: McCae first called his attention to the fact that Mrs. O'Hara came to his office by appointment and he drew the present will from instructions given by her and from the previsions of the former will, which was drawn by Jadye McCue. It was his impression that there was a residuary clause in the old will similar to the one in

warmest terms with reference to, the disposition of her property; and latterly, after the will was made, she reterred to them in a more unfriendly way than before. It was about the time that the will was made that she first spoke of her property, and asked the winness to he one of the executors, telling how she would leave her exact to certain charitable institutions, shares and share nike. She also mentioned some educational institutions, and the winness spoke of the Long Island College Hospital. He never suggested the idea of his being one of the residuary legasted the idea of his being one of the residuary legasted the idea of his being one of the residuary legasters. After the will was made he knew the provisions and thanked Mrs. O'Hara for bequeathing \$5,000 to the hospital. She then spoke of her bequeats to certain elergymen, and said also that she had remembered her grand-dangaters. In regard to the residuary portion of her estate, Mrs. O'Hara said that she left it to her executors for educational and charitable purposes, to be used according to their tonor, discretion and juagment. She desired some young men educated for the prieschood, and spoke of a son of Hugh O'Hara. The whiresh had no idea of the reasons for revoking, by the coded, and the nearing was adjourned until to-day. Edgar M. Callen appeared for the proponents of the will, and Morris & Pearsail, Stow & Hoopes and J. C. Jones for the contestants.

THE TITLE TO THE SHEPHERD'S FOLD. "The Shepherd's Fold of the Protestant Episcopal Church of the City of New-York" is the name of a

charitable institution incorporated in March, 1869, by Regular elections of trustees were held in accordance with the provisions of the certificate of incorporation each year until 1874. At the close of that year its home became unminabitable, the children under its protection parently inanimate condition until March, 1877. In the middle of that month W. K. Gardner, one of the original corporate associates, but not one of the trustees elected in November, 1874, called a meeting of the corporation, and a Board of Trustees was elected. But for the twenty corporators only cleven votes were cast, and three of these were given by proxy for persons not pres-ent. Some feeling began to be manuested toward these

tors, had the right to the title and control of the institution.

The General Term of the Supreme Court, resterday, sent down a decision reversing the judsment of the Circuit Court, from which the appeal was taken, and
granting a new trial. Justice Daniels, who whote the
opision, holds that the exist corporators present at the
meeting in March 1877, being less than a majority,
could not have carried on a regular election, no legal
anthority existing empowering any vote by proxy.
Even if these trustees had been regularly elected, it was
only to fill the racancies existing or the remainder of
the year; they were then supreseded as trustees by
those elected at the meeting held in November. The
Court holds that the plaintiffs (the board elected in November) "were entitled to a direction of a verdict in
their rayor, which, under the occumistances, should
have been given to the jury." A new trial is therefore
granted.

DECISIONS—SEPI. 2

Supreme Court—Chambers—by Judge Westbrook,
—Emigrant Industrial Savinas Bank and, McNemara.—Ordergranted appointing Adolph Aroher referee. Howe Mackine
Company art. Brand.—Enter order that plaintiff have
judgment for damages to be assessed and costs
laxed by clera. Nosser art. Felten.—Motion
granted Weeks art. Heamer; Balester agt. Carrier,
Hall agt. Canaran; Hall agt. White: Francis
agt. Wallace; Pottsagt. The Inited States Carpe Company;
De Forcest act. Mctinckin; Gasetiner agt. Issaes; Fish agt.
Draner; Kaltmant act. Germania Schotten inust, in the
matter of strobel; Bull agt. Balt; Universal Life In-craace
Company agt. Wright; Harper agt. Gimmer; Wolff agt.
Wolff; Lambert agt. Browning; Petro agt. Mixlow; Which
agt. Smook; Burns agt. Mott. Chaffin agt. Currier: Serbin
agt. Hailigan; Second National Bank of Norwick art Vas.
Horn Lumber Company.—Orders granted. Marselis agt.
Pardy.—Granted.

Pardy.—Granted.

Common Picas—Special Term—By Judge C. P. Daiv.

- Mayer's act. Erostein.—Bond approved. In the matter of
the assignment of Veit, etc., in the matter of the assignment
of Wilson, etc., in the matter of the dassignment of Thaiman
Anthony agt. Henry: The Grocers' Bank agt. Murphy.—

Anthony agt. Hehry; the Grocers Bank agt. state of Grantod.

Marrine Coart—Chambers—By Justice Goopp.—
Hoeft agt. Smith.—Judgment for plaintiff for \$25 damages and coals. Tucker at. Denotate.—Proceedings dismissed. Welf agt. Buckner.—Motion denied without costs. Schooled agt. Glazier.—Motion granted for September 19, 1879. McKoo agt. Keys.—Motion granted for September 19, 1879. McKoo agt. Keys.—Motion granted for September 19, 1879. McKoo agt. Inc. However Sautigs Hauk—United granted directing plaintiff to roply. Whalen, receiver, agt. Leich.—Motion for interplement granted and september granted agt. Of the L. Frace agt. Goott.—Reference ordered. Duffield agt. Often.—Fracedings amendes. Saidman agt. Morgan.—Motion granted opening default, Hang agt. Mikscherling.—Motion granted with \$10 costs to plained to ablide event.

SUPURME COURT-CHAMBERS-Westbrook, J.-Court occupat 10:30 a. m. Calendar cahed at 11 a. m. Nos. 59, 73, 79, 84, 85, 86, 88, 89, 108, 110, 115, 120, 128, 164, 108, 169, 172, SUPERIOR COURT-SPECIAL TERM-Sodgwick, J.-No day

WOKE UP.-Boots-"Eight o'clock, surr!" Youe (from the deeps)-"Why didn't ye tell me that be-fore, confound you!"-(Punch.

Bankrupt Notices.

THIS IS TO GIVE NOTICE: That on the THIS IS TO GIVE NOTICE: That on the 20th day of August, A. D. 1870, a warrant in Banarupter was isoned against the estate of CHARLES D. Lakkey, of New York, in the County of New York and State of New York, who has been adjudged a bankrupt on his own petition that the payment of any debts and delivery of any property belonging to eight bankrupt to him or for his nee, and the transfer of any property by him, are forbidden by law; that meeting of the creditors of the said bankrupt, to prove their debts and to choose one or more assigness of his estate, will be held at a Court of Hankruptcy, to be holden at No. 182 Rroadway, in the City of New-York, before Mr. Heary Wilder Allen, Register, on the 25th day of September, A. B. 1879, at 12 o ciock to.

U. S. Marshai, as Messenger, Southern District of New York

THIS IS TO GIVE NOTICE: That on th 25th

U.S. Marshal, as Messenger, Southern District of New York

Lost and found.

LOST.—Bank book No. 9,020 of the German Uptown Sevings Bank; the finder will please return same to PHILLP KOKHLER, 869 2d ave. LOST.—Bank Book No. 1,767, issued by the German savings Bank in the City of New York to JOHN SCHELLEMANN, is missing. The finder of holder of shook is requested to deliver it to the Bank. If not restored before the 4th day of October, 1879, application will be made to the stank for a new book.

Enropean Advernsements.

TAMAR INDIEN. (UNIVERSALLY PREmedicated fruit location, for all medicated fruit location, for the immediate relief and effecting
cure of constipation, feestache, bite, hemorrhoids, for Tamaqualike pills and the usual purgatives) is agreeable to take not
never produces irritation. & ORILLON, No. 27 Rue Ran
buttoni, Paris. Sold by all chemists.